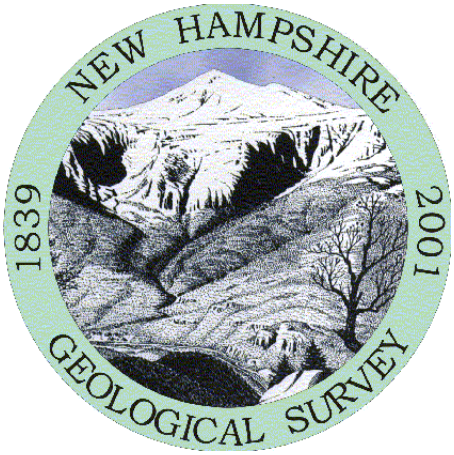
Groundwater Level Monitoring July 2018



New Hampshire Geological Survey
29 Hazen Drive, PO Box 95
Concord, New Hampshire 03302-0095

August 17, 2018

GROUNDWATER CONDITIONS SUMMARY

According to the Northeast Regional Climate Center at Cornell University (NRCC), New Hampshire received an average of 4.76 inches of rain during the month of July, which is 0.38 inches above normal based on the 1981-2010 precipitation records. That represents 109% of normal precipitation for the month (NRCC). The state is currently free from drought conditions, yet 47.9% of the state is abnormally dry according to the latest data from National Drought Mitigation Center (NDMC).

The New Hampshire Geological Survey's groundwater monitoring network (Figure 1) includes 11 bedrock (Figure 2) and 19 overburden (Figure 3) observation wells, all of which are measured monthly by hand. Using the monthly hand readings, monthly averages and percentile statistics were calculated and are graphically summarized in Figures 1 through 3 and in the following hydrographs. The hydrographs show the following data over a period of six months: (1) current groundwater depths, (2) the monthly average over the period of record (POR) of the well, and (3) color-coded statistical ranges over the POR of the well.

The data show that all of the bedrock wells in the network are within the normal to above normal range. The Rindge wells have consistently been in the normal to above normal range during the last six month period. The overburden wells, or wells that monitor the unconsolidated materials above bedrock, are indicating groundwater levels predominantly recovering into the normal range this month. A few wells (Concord CVW-04, Colebrook, New London, Newport and Ossipee) however, are lagging in the below normal or low conditions.

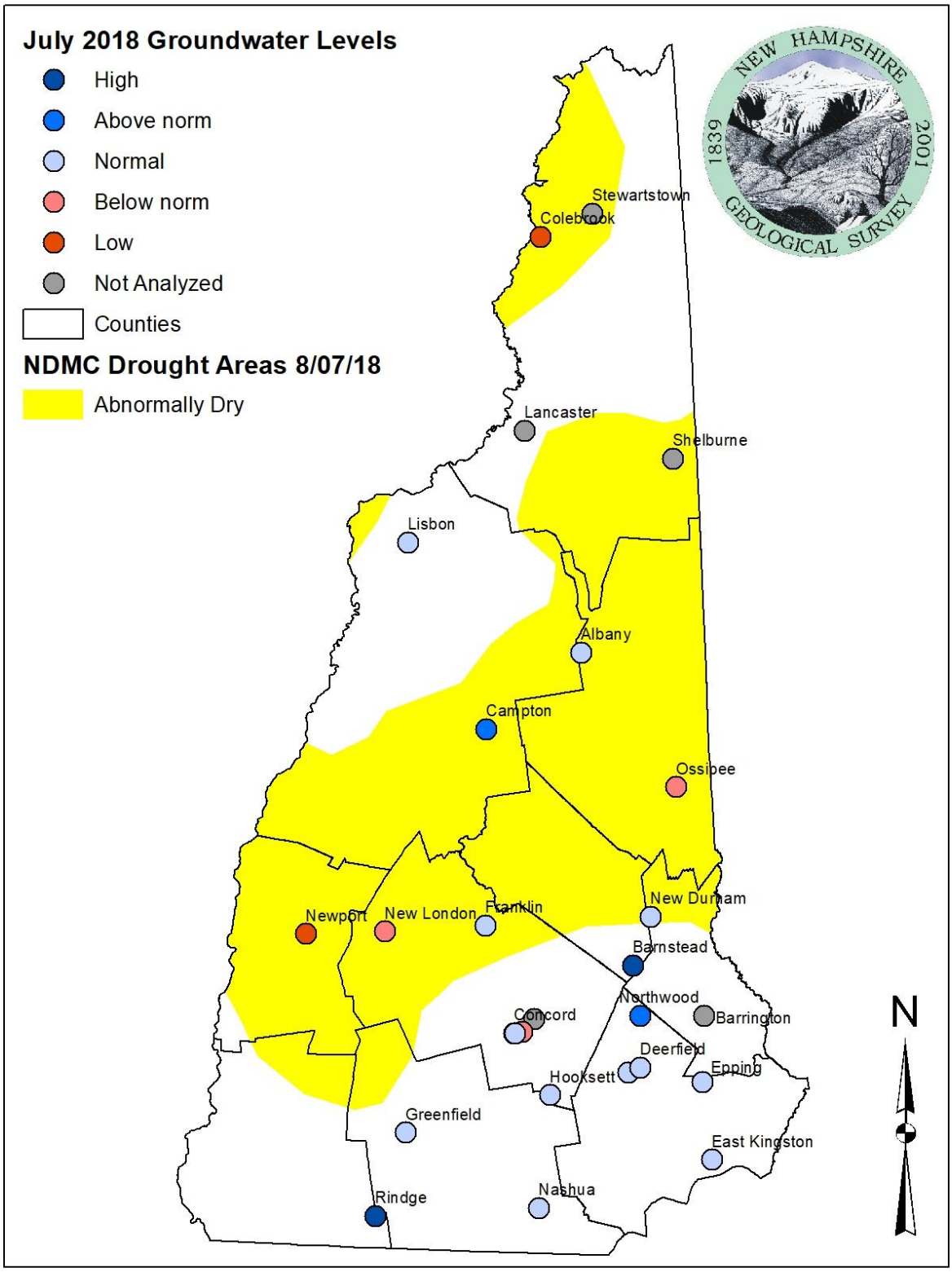


Figure 1. Groundwater Monitoring Network showing July 2018 groundwater levels with respect to drought areas defined by the National Drought Mitigation Center on August 7th.

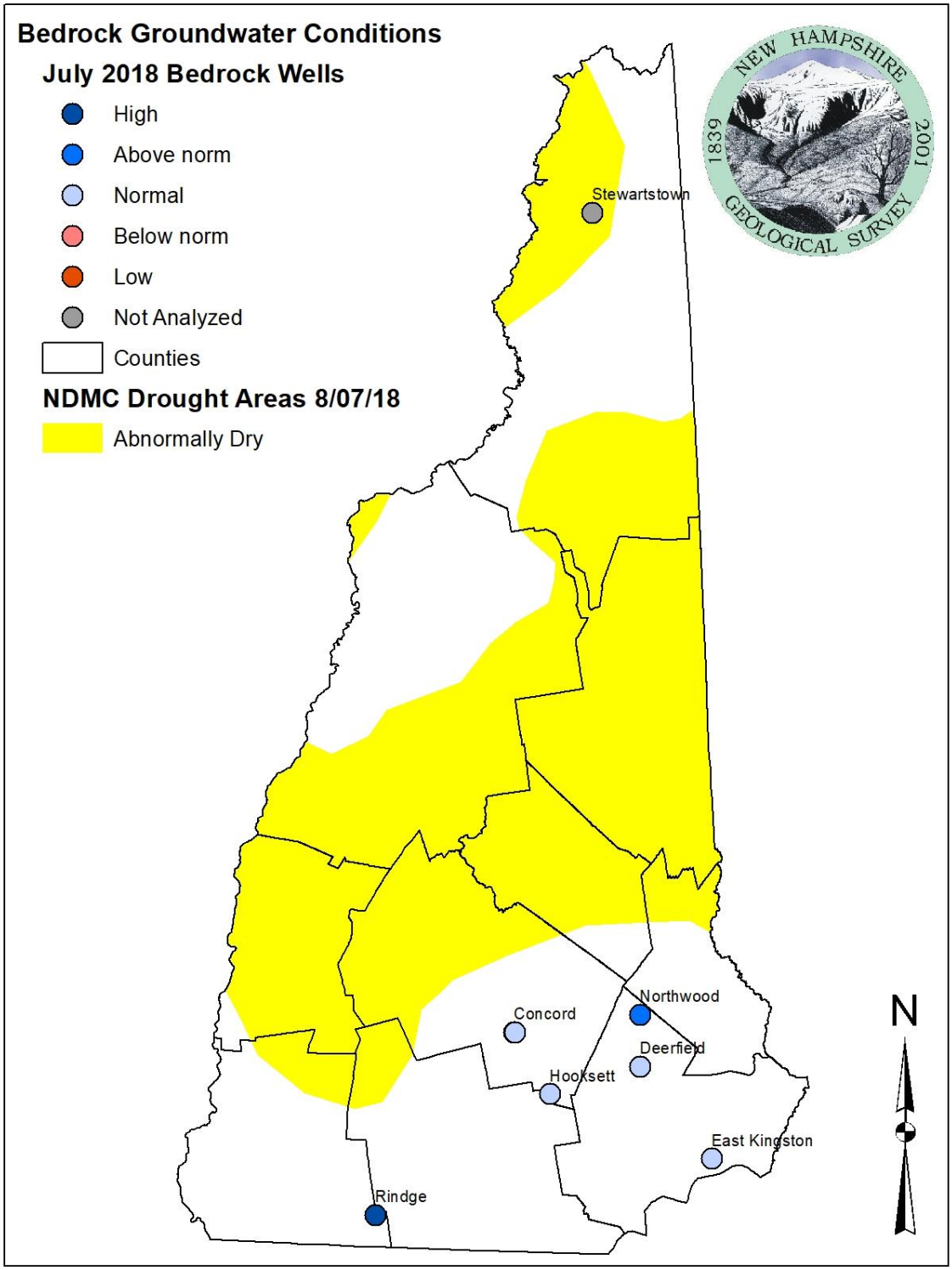


Figure 2. Bedrock wells showing July 2018 groundwater levels with respect to drought areas defined by the National Drought Mitigation Center on August 7th. Note: Points at Kingston, Concord, Stewartstown, and Rindge show coupled bedrock wells.

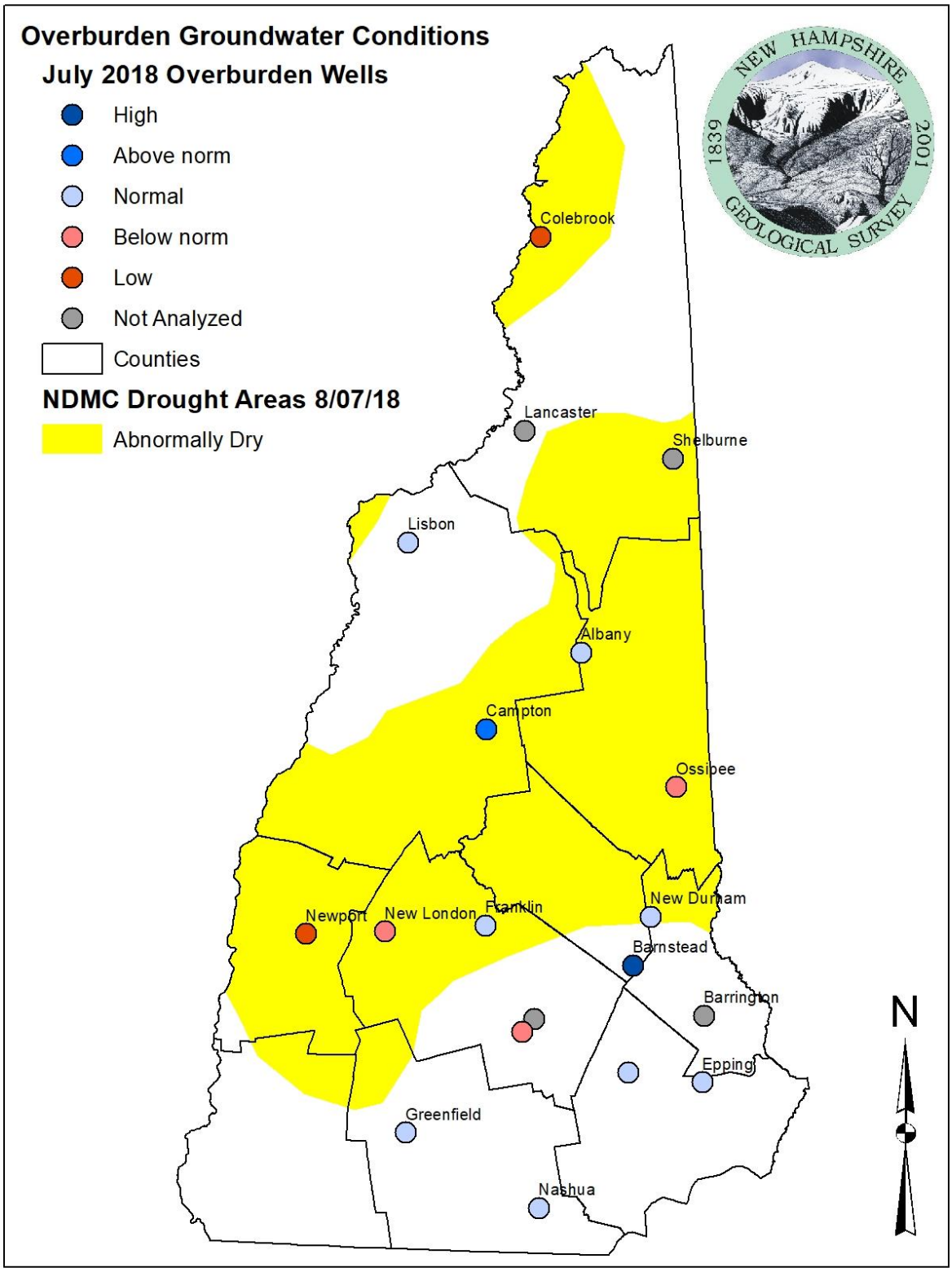
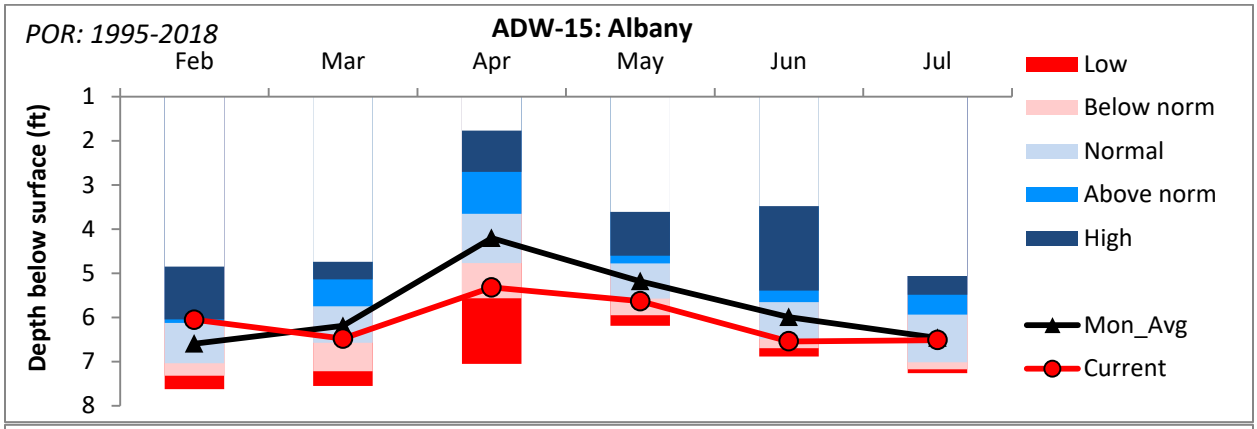
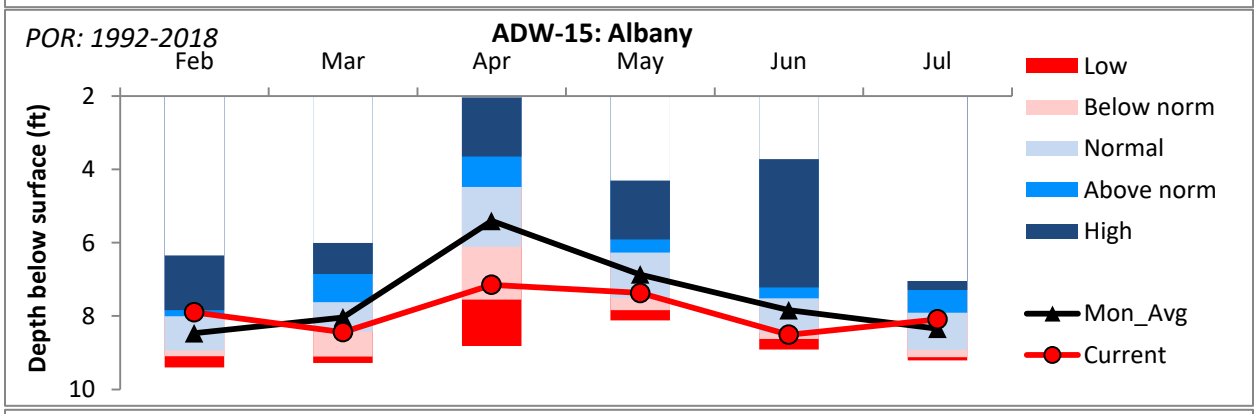
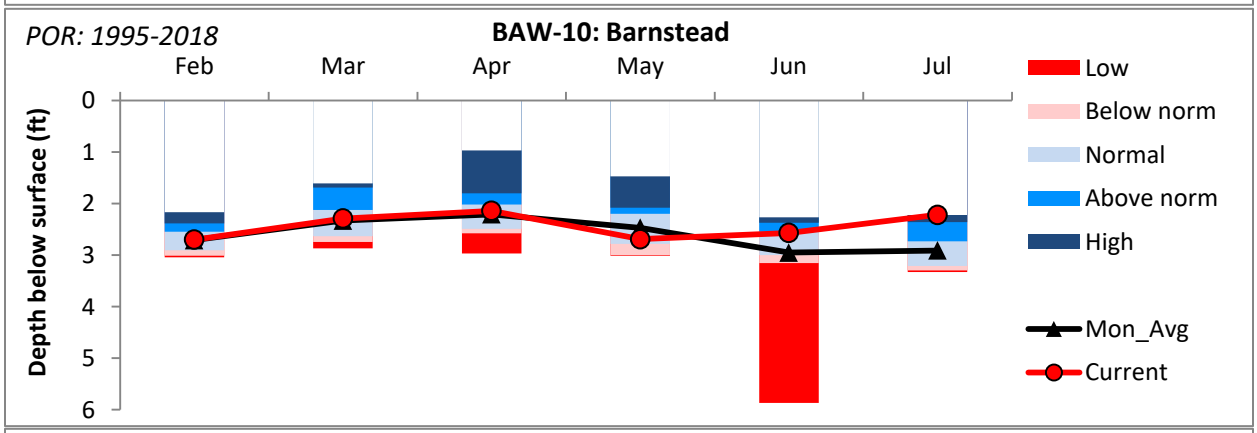


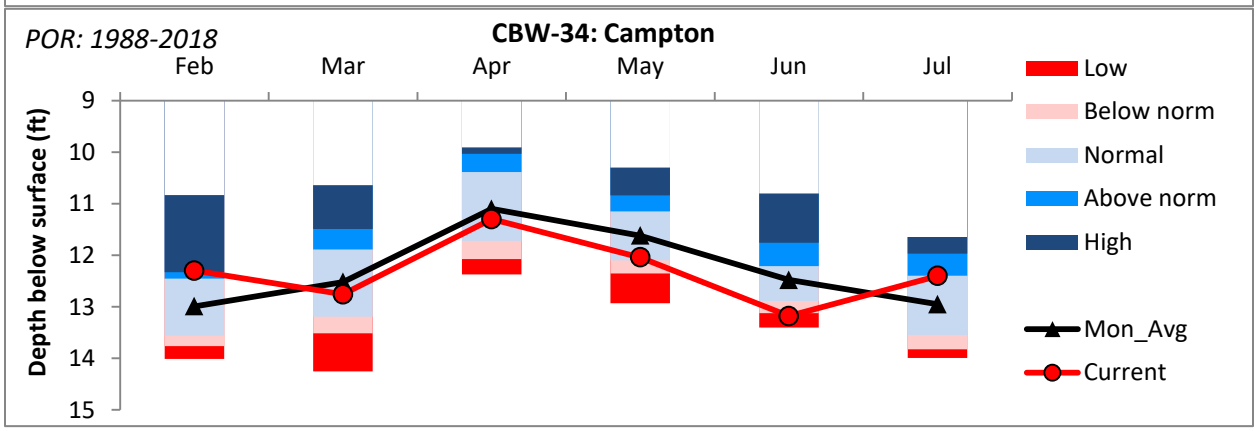
Figure 3. Overburden wells showing July 2018 groundwater levels with respect to drought areas defined by the National Drought Mitigation Center on August 7th. Note: Points at Newport and Albany represent a couplet.

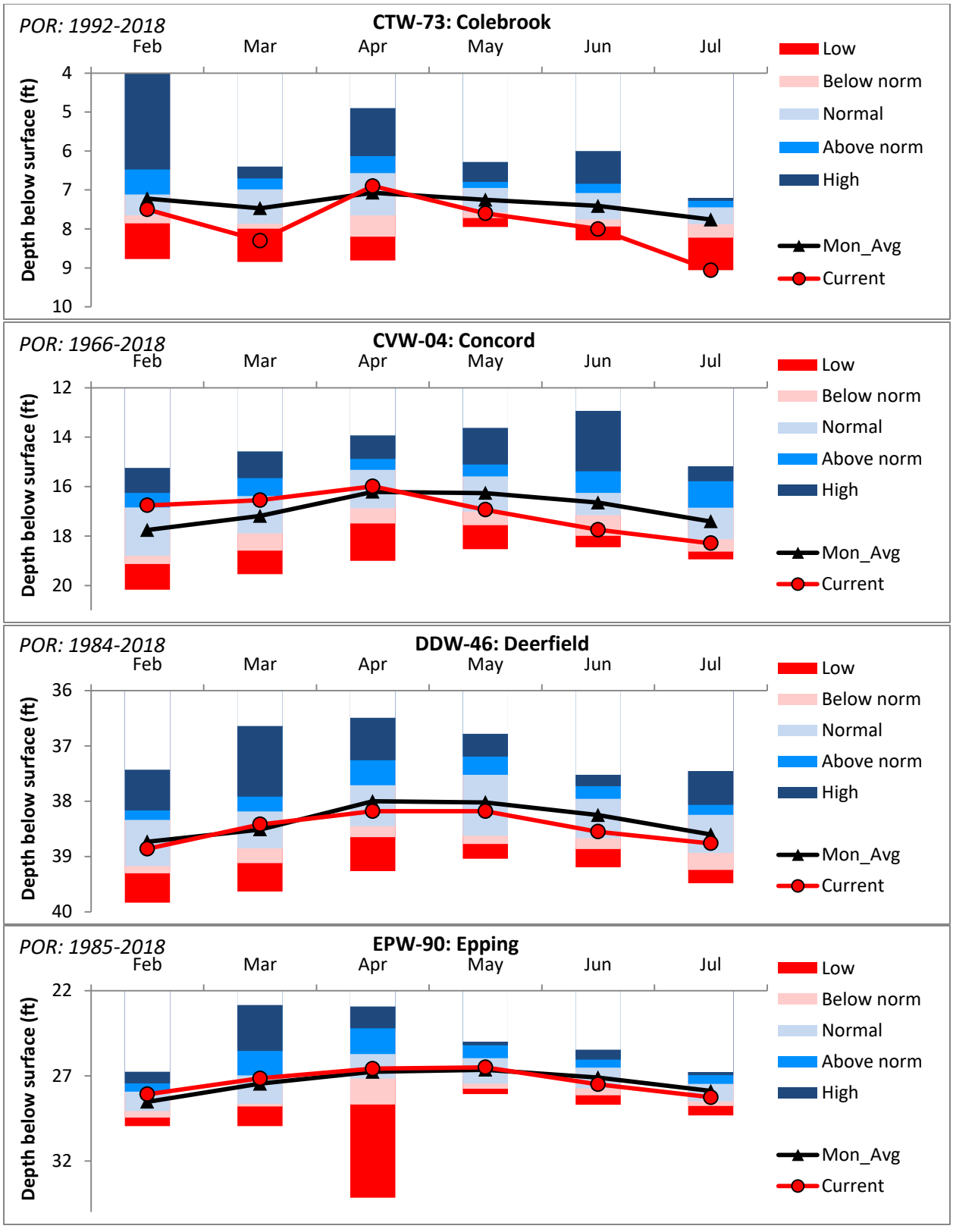
OVERBURDEN WELL HYDROGRAPHS

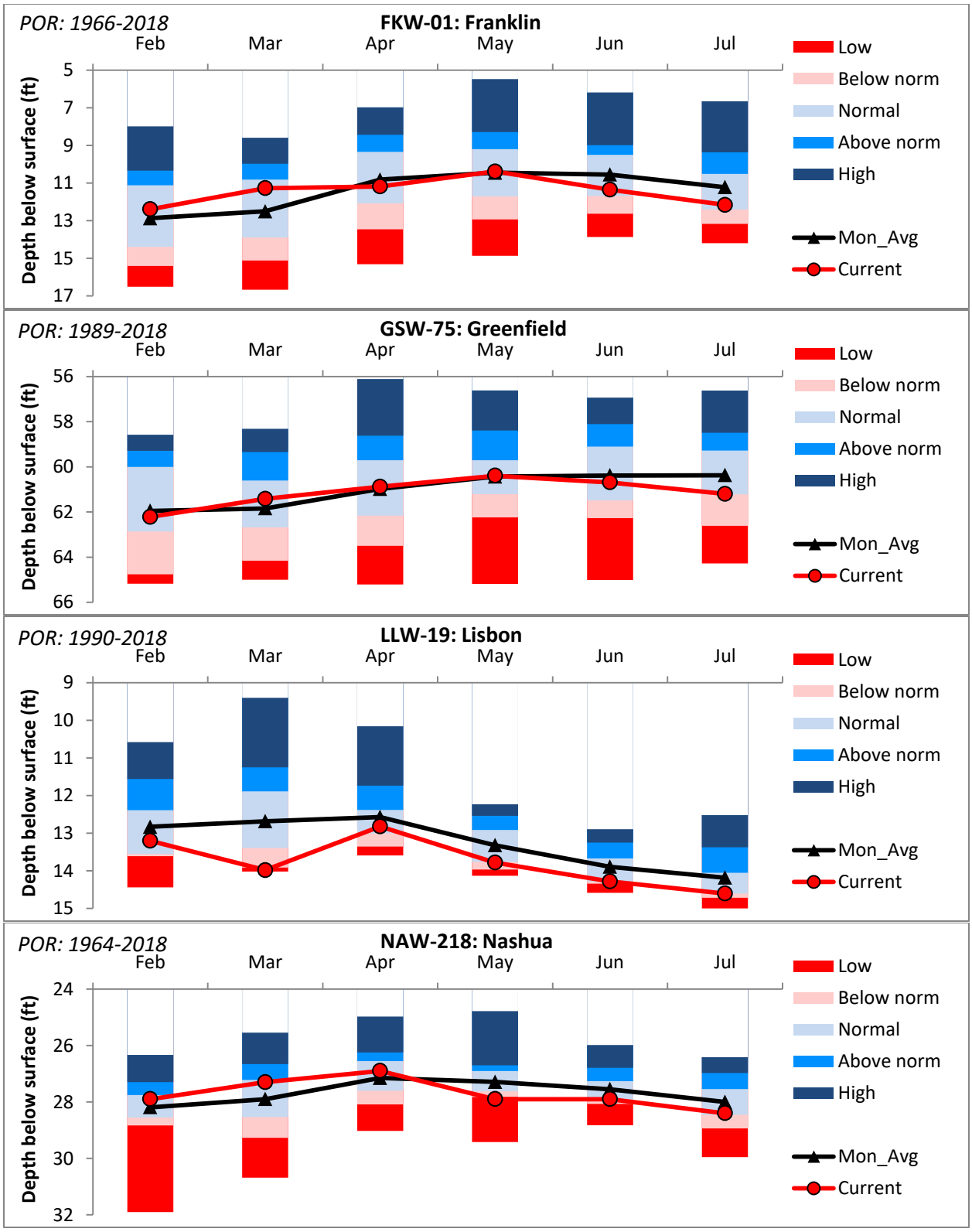


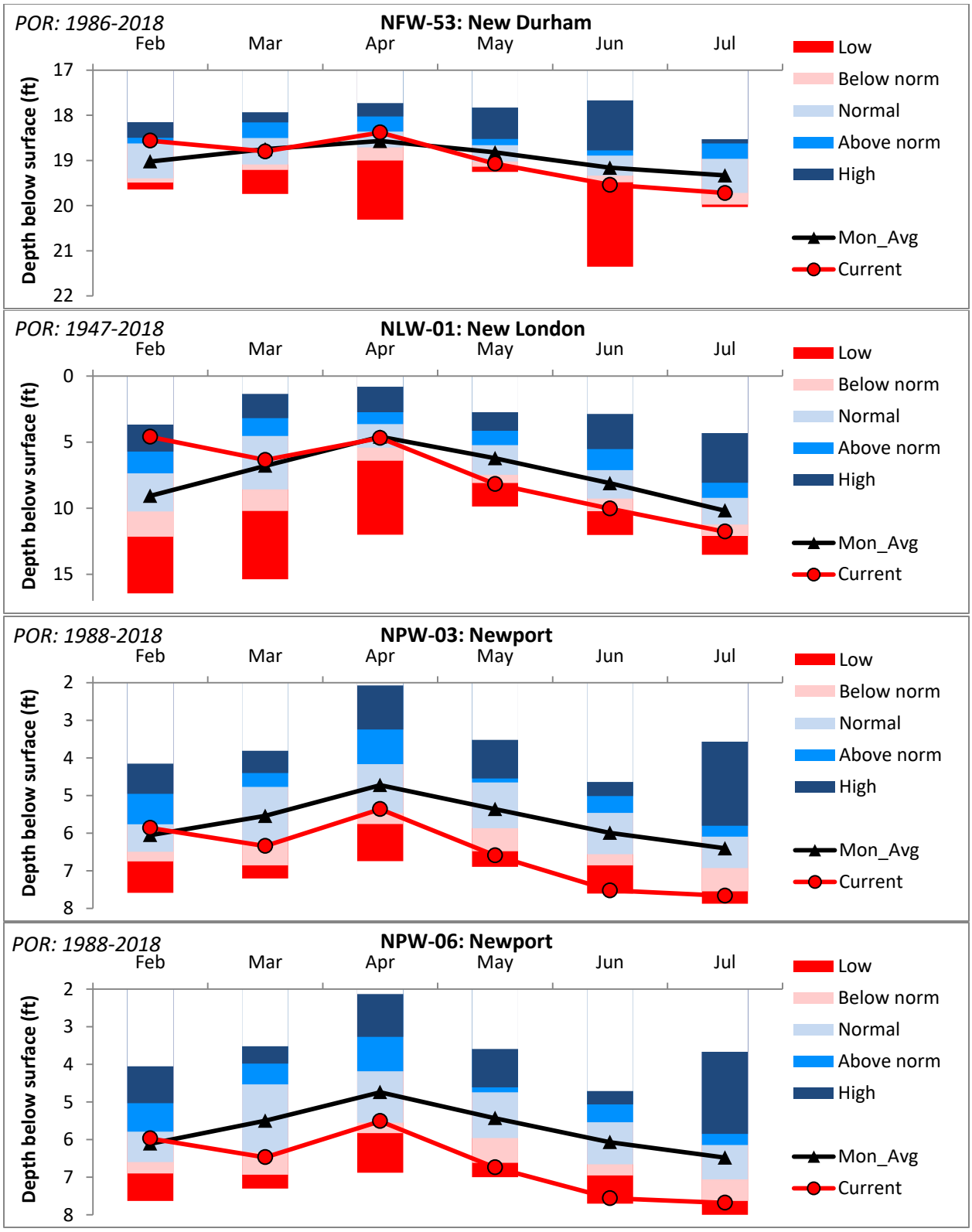


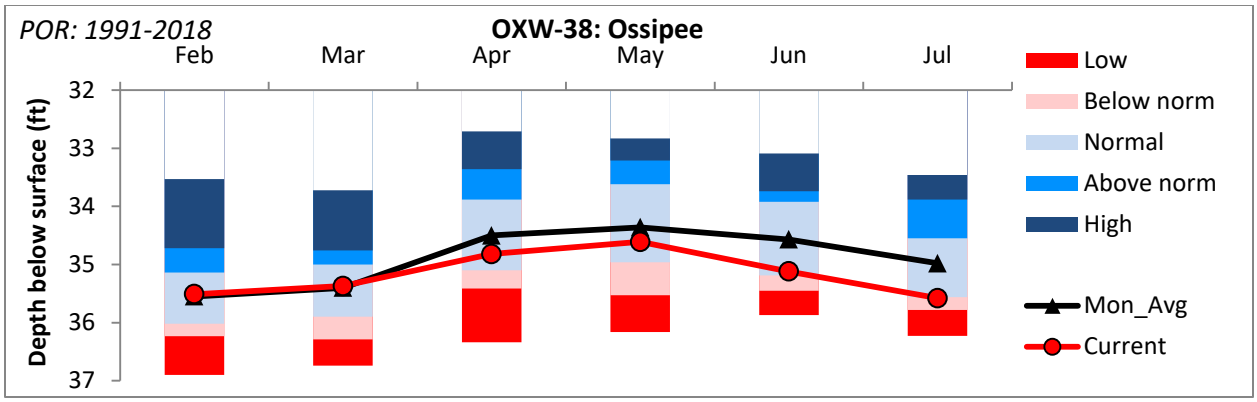




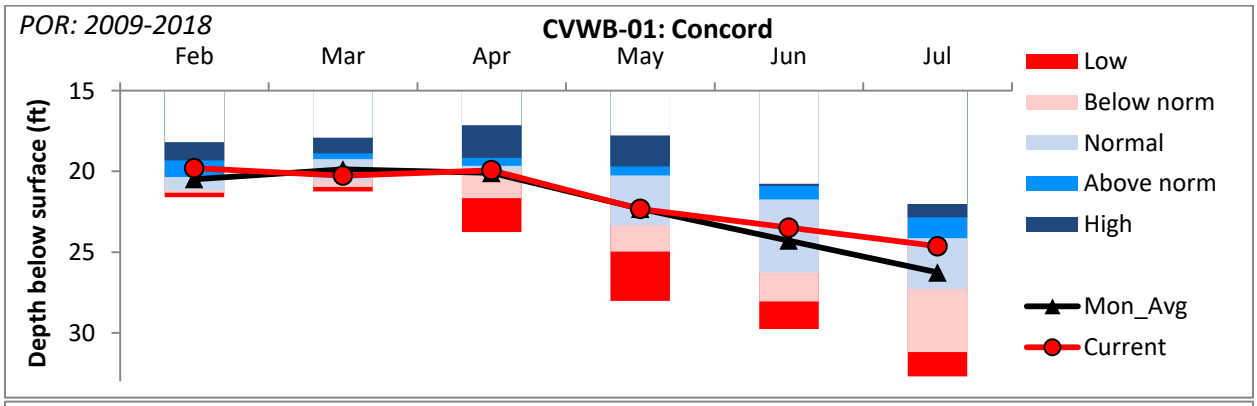

POR: 1992-2018
CTW-73: Colebrook
Feb
Mar
Apr
May
Jun
Jul
Depth below surface (ft)
4
5
6
7
8
9
10
Low
Below norm
Normal
Above norm
High
Mon_Avg
Current
POR: 1966-2018
CVW-04: Concord
Depth below surface (ft)
12
14
16
18
20
POR: 1984-2018
DDW-46: Deerfield
Depth below surface (ft)
36
37
38
39
40
POR: 1985-2018
EPW-90: Epping
Depth below surface (ft)
22
27
32

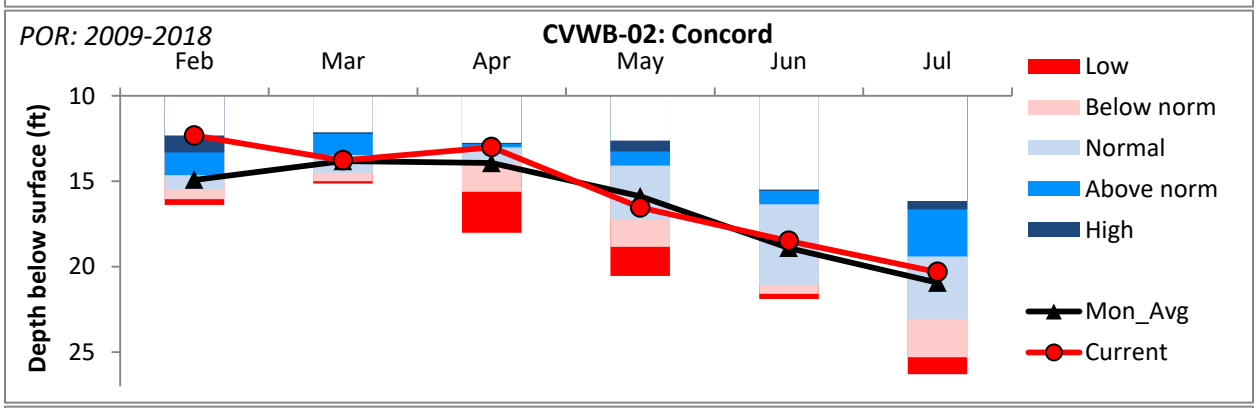

POR: 1966-2018
FKW-01: Franklin
Feb
Mar
Apr
May
Jun
Jul
Depth below surface (ft)
5
7
9
11
13
15
17
Low
Below norm
Normal
Above norm
High
Mon_Avg
Current
POR: 1989-2018
GSW-75: Greenfield
Feb
Mar
Apr
May
Jun
Jul
Depth below surface (ft)
56
58
60
62
64
66
Low
Below norm
Normal
Above norm
High
Mon_Avg
Current
POR: 1990-2018
LLW-19: Lisbon
Feb
Mar
Apr
May
Jun
Jul
Depth below surface (ft)
9
10
11
12
13
14
15
Low
Below norm
Normal
Above norm
High
Mon_Avg
Current
POR: 1964-2018
NAW-218: Nashua
Feb
Mar
Apr
May
Jun
Jul
Depth below surface (ft)
24
26
28
30
32
Low
Below norm
Normal
Above norm
High
Mon_Avg
Current

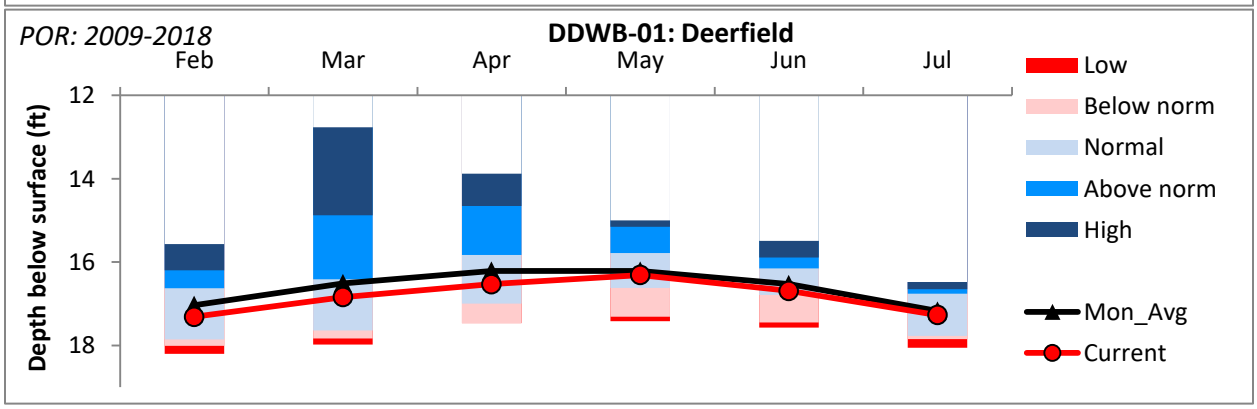

POR: 1986-2018
NFW-53: New Durham
Feb
Mar
Apr
May
Jun
Jul
Depth below surface (ft)
17
18
19
20
21
22
Low
Below norm
Normal
Above norm
High
Mon_Avg
Current
POR: 1947-2018
NLW-01: New London
Feb
Mar
Apr
May
Jun
Jul
Depth below surface (ft)
0
5
10
15
Low
Below norm
Normal
Above norm
High
Mon_Avg
Current
POR: 1988-2018
NPW-03: Newport
Feb
Mar
Apr
May
Jun
Jul
Depth below surface (ft)
2
3
4
5
6
7
8
Low
Below norm
Normal
Above norm
High
Mon_Avg
Current
POR: 1988-2018
NPW-06: Newport
Feb
Mar
Apr
May
Jun
Jul
Depth below surface (ft)
2
3
4
5
6
7
8
Low
Below norm
Normal
Above norm
High
Mon_Avg
Current

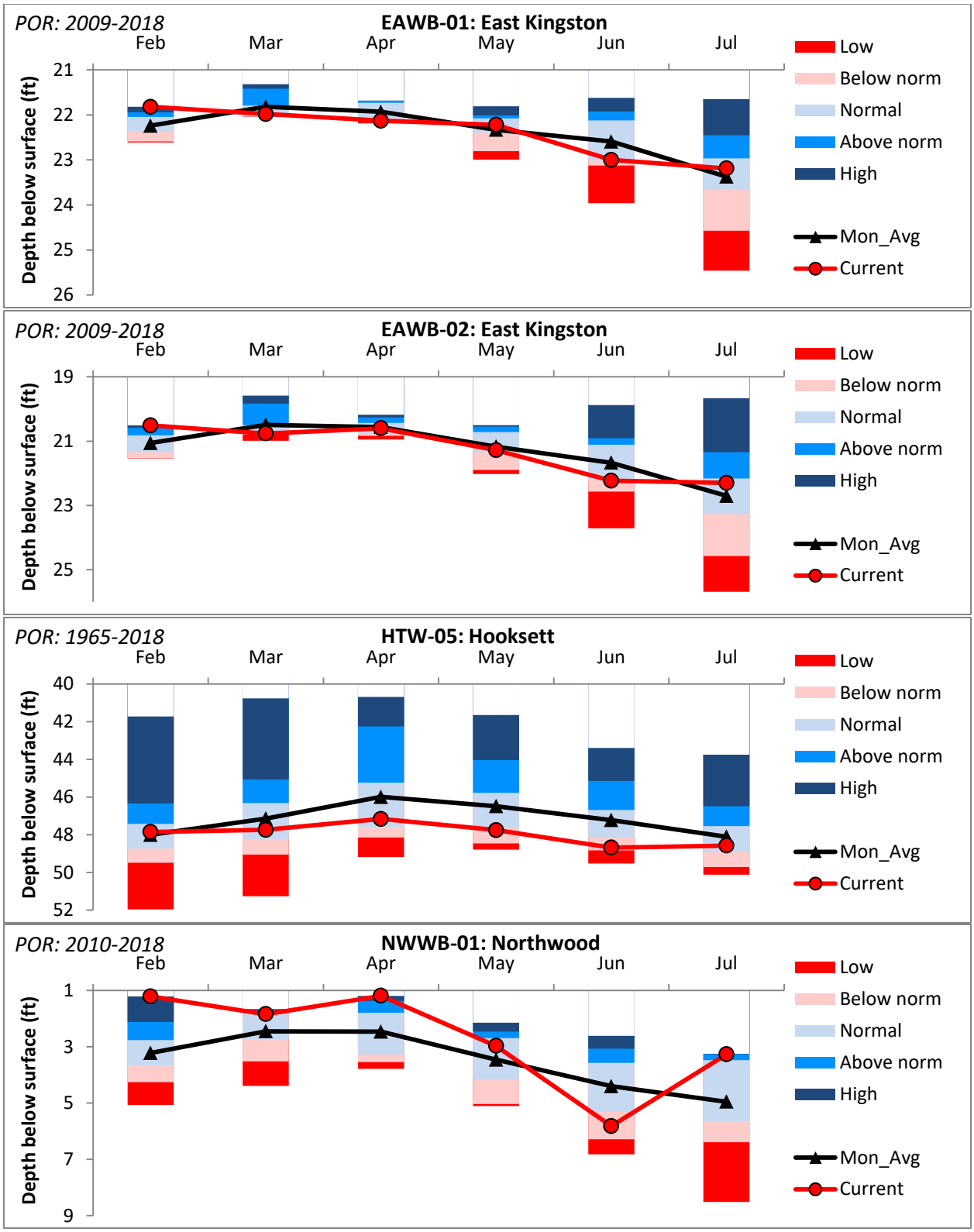


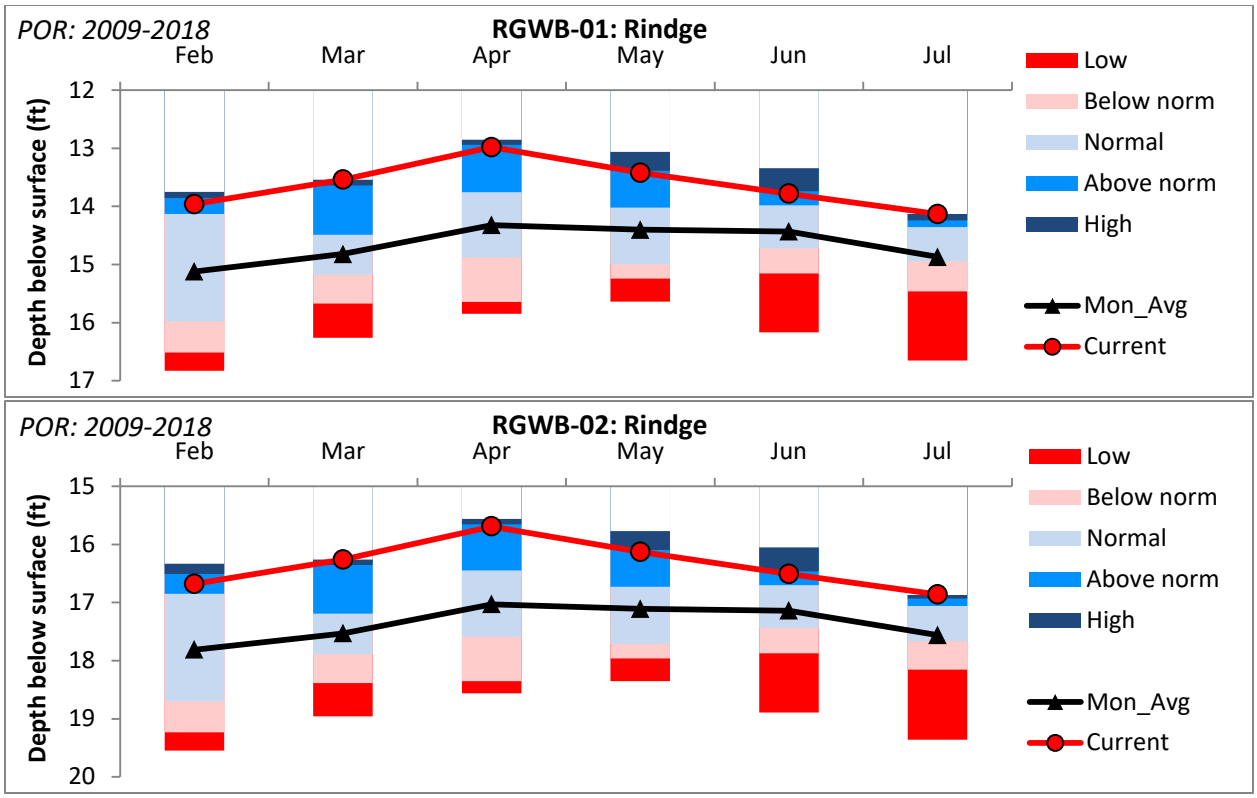
BEDROCK WELL HYDROGRAPHS








POR: 2009-2018
EAWB-01: East Kingston
Feb
Mar
Apr
May
Jun
Jul
Depth below surface (ft)
21
22
23
24
25
26
Low
Below norm
Normal
Above norm
High
Mon_Avg
Current
POR: 2009-2018
EAWB-02: East Kingston
Feb
Mar
Apr
May
Jun
Jul
Depth below surface (ft)
19
21
23
25
Low
Below norm
Normal
Above norm
High
Mon_Avg
Current
POR: 1965-2018
HTW-05: Hooksett
Feb
Mar
Apr
May
Jun
Jul
Depth below surface (ft)
40
42
44
46
48
50
52
Low
Below norm
Normal
Above norm
High
Mon_Avg
Current
POR: 2010-2018
NWWB-01: Northwood
Feb
Mar
Apr
May
Jun
Jul
Depth below surface (ft)
1
3
5
7
9
Low
Below norm
Normal
Above norm
High
Mon_Avg
Current


POR: 2009-2018
RGWB-01: Rindge
Feb
Mar
Apr
May
Jun
Jul
Depth below surface (ft)
12
13
14
15
16
17
Low
Below norm
Normal
Above norm
High
Mon_Avg
Current
POR: 2009-2018
RGWB-02: Rindge
Feb
Mar
Apr
May
Jun
Jul
Depth below surface (ft)
15
16
17
18
19
20
Low
Below norm
Normal
Above norm
High
Mon_Avg
Current